

Remarks/Arguments

Claims 1, 2, 8-10 and 27-29 are pending in the application.

Rejection of Claims 1, 2, 8-10 and 26-29 under 35 U.S.C. § 112

Claims 1, 2, 8-10 and 27-29 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing new matter. Specifically, the Office alleges that the instant specification “does not reveal that the instant acrylate copolymer is in the form of an emulsion” (Office Action, page 2). The Office instead asserts that the instant specification reveals that “the final composition after the addition of the instant polymer may be in the form of emulsion.”

Applicants respectfully disagree with the Office’s rejection. In the instant specification, at page 3, line 31 it is stated: “The acrylate copolymer is typically provided in the form of an emulsion” Further, the specification goes on to state that such emulsion “is a thin, non-viscous liquid as a 45% polymer-in-water emulsion”, as recited in claim 29. (Page 3, lines 31-32). Accordingly, and contrary to the Office’s allegations, Applicants submit that the amendment to claim 1 made in Applicants’ prior response reciting “a water dispersible acrylate copolymer emulsion” is clearly supported by the instant specification. Hence, no new matter was added with the amendment. Withdrawal of the Section 112, first paragraph, rejection is hereby respectfully requested.

The Claimed Invention

As a preliminary matter, the Office at page 11 of the Response to Arguments Section of the Office Action states, “[w]ith respect to the polymer emulsion, it is the position of the examiner that the instant polymer is not an emulsion and instead the polymer is added to a composition to render an emulsion.” Applicants respectfully disagree and submit that such a position is not correct and is contrary to Applicants’ claimed invention. Rather, Applicants’ invention, as recited in claim 1, among other limitations, recites:

A personal care composition comprising a water-proofing effective amount of a water dispersible acrylate copolymer emulsion having essentially no hydrophobic monomers having an alkyl group of greater than or equal to C8. . . . (emphasis added).

Accordingly, claim 1 is directed to a personal care composition which includes a water-proofing effective amount of a water dispersible acrylate copolymer emulsion. That is, the acrylate copolymer is in the form of an emulsion. The personal care composition, however, is not limited to being an emulsion. This position is supported by dependent claim 27, which further defines the composition of claim 1, i.e. the personal care composition of claim 1, is an emulsion. Thus, under the doctrine of claim differentiation, claim 1 clearly cannot be limited to the features of claim 27.

In addition, dependent claim 29 recites that the acrylate copolymer is in the form of a 45% polymer-in-water emulsion. Thus, notwithstanding the fact that claim 1 has been improperly interpreted such that the instant polymer is considered to not be an emulsion, the Office has not considered that dependent claim 29 requires the acrylate copolymer to be a 45% polymer-in-water emulsion.

In view of the above errors in which the Office has misinterpreted Applicants' claims, Applicants respectfully request reconsideration of the instant application. To the extent that the Office's rejections are based on such improper interpretation(s), Applicants respectfully request withdrawal of the outstanding rejections.

Rejection of Claims 1, 2, 8-10 and 27-29 under 35 U.S.C. § 103(a) based on Seib in view of Kubik

All pending claims stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 4,085,265 ("Seib") in view of U.S. Patent No. 4,172,122 ("Kubik"). Specifically, the Office alleges that Seib discloses copolymers similar to that of the instant invention, but that Seib fails to teach the exact percentages of the claimed polymers, particularly with respect to butyl acrylate. (Office Action, page 4). Further, the Office acknowledges that Seib "does not specifically recite an emulsion. . . ." (Office Action, page 5).

To supply the missing features, the Office turns to Kubik. The Office alleges that Kubik teaches a sunscreen composition comprising an oil-base, water-insoluble (UV) light absorbing materials which is soluble in the oil and a water insoluble acrylate polymer. (Office Action, page 5). The Office asserts that Kubik teaches adding water to the polymer containing oil based compositions to prepare emulsions and that the insoluble polymers include alkyl esters of 6 to 18 carbon atoms and exclude lower alkyl esters, implying that the lower alkyl esters impart oil insoluble characteristics to the composition. (Office Action, page 6). The Office alleges that Kubick teaches that the polymers may be prepared by any standard bulk, solution or emulsion polymerization, with the latter two being prepared. (Office Action, page 6). However, the Office acknowledges that Kubik "fails to explicitly teach the acrylate polymer of claimed monomer distribution." (Office Action, page 6). The Office ultimately alleges that it would have been obvious to employ the acryate polymers of Seib as emulsifiers in preparing emulsion compositions and also impart effective film forming and thus sunscreen effects. (Office Action, page 6). The Office further asserts that a skilled artisan would have prepared acrylate film forming polymer of Seib by employing any of the known methods such as standard bulk, solution or emulsion polymerization because a skilled artisan would have understood that according to Kubik the film forming properties and emulsifying properties are unaffected by the method of preparation. (Office Action, page 7).

In the Response to Arguments Section of the Office Action, the Office asserts that Applicants have not shown any unexpected advantage in preparing the polymer by emulsion polymerization as compared to various methods recognized by the art, specifically Kubrik, which discloses preparing emulsifier film forming acrylate polymers by different methods.

Response to Rejection of Claims 1, 2, 8-10 and 27-29 under 35 U.S.C. § 103(a) based on Seib in view of Kubik

Applicants respectfully submit that the currently pending claims are patentable over these cited references for at least the following reasons. First, as acknowledged

by the Office, Seib fails to disclose or suggest its polymer in the form of an emulsion. As further acknowledged by the Office, Kubik fails to disclose a polymer such as recited in claim 1, but mentions that its polymers may be prepared by any standard bulk, solution or emulsion polymerization, with the latter two being preferred. As noted above, Kubik does disclose that its film forming polymers can be made by different methods and as such, it can be inferred from Kubik that such disclosure teaches that the film forming properties and emulsifying properties are unaffected by the method of preparation. Contrary to the Office's assertion, however, such lack of disclosure fails to support the Office's alleged *prima facie* case of obviousness.

As gained from the alleged combination of Seib and Kubik, Seib fails to disclose a polymer in the form of an emulsion. Kubik discloses that its polymers can be made by different methods, one no more desirable than the others. Accordingly, it is the Office's burden to establish why one of ordinary skill in the art would have prepared the particular polymer of Seib and do so in the form of an emulsion rather than in the forms taught by Seib. Further, the Office must do so without using Applicants' own disclosure as a roadmap, i.e. without using impermissible hindsight, especially where there is no guidance from the combination of Seib and Kubik to have made the polymer of Seib in the form of an emulsion in making a film forming composition. As the Office admits, there appears to be nothing in Kubik to suggest that of the different forms, one would have been more desirable than the others. Thus, based on the combination of Seib and Kubik, there appears to be no indication to one of ordinary skill in the art that the form of the polymer of Seib would even need to be modified to be used in Kubik. Accordingly, without Applicants' own specification, one of ordinary skill in the art would have had no reason to modify the form of the polymer of Seib, much less make Seib in the form of an emulsion based on the general teachings of Kubik.

In contrast, a copolymer emulsion as claimed by Applicants is particularly important because it provides a water proofing effect to the personal care composition. These acrylate copolymers are more readily incorporated into the water phase of personal care compositions without the need for special processing.

Second, Seib teaches “[i]t is an object of the present invention to provide a film-forming agent which, though readily soluble in ethanol, isopropanol and methylene chloride, has a low water absorption” (Seib, col. 1, lines 36-41). In contrast, Kubrik teaches that “[p]rior art compositions utilizing polymers or polymeric film formers suffer from a number of disadvantages.” (Seib, col. 1, lines 66-67) Specifically, Kubrik identifies that “the compositions are generally applied from alcoholic solutions, which can be irritating and drying to the skin, difficult to apply evenly, and which provide minimal moisturization. Furthermore, the resulting films tend to provide poor wet abrasion resistance.” (Seib, col. 2, lines 3-8). Accordingly, where Kubrik disparages the film formers and in particular those applied from alcoholic solutions, such as those clearly identified as being those disclosed in Seib, Applicants submit that Kubrik teaches away from Seib. Accordingly, one of ordinary skill in the art would not have combined the references of Kubrik and Seib.

Third, as recited in claim 1, the claim is directed to a personal care composition comprising a water-proofing effective amount of water dispersible acrylate copolymer emulsion, among other features. Thus, as understood from claim 1, the acrylate copolymer emulsion is water dispersible. That is, the acrylate copolymer emulsion is an emulsion that is dispersible in water. In addition, as recited in claim 1, the copolymer is readily dispersible in the personal care composition at any point during processing without the need for additional processing.

In contrast, Kubrik teaches that its polymeric binders, which can be film-formers, comprise a water-insoluble acrylate polymer. The oil films of Kubrik “consists of primarily nonvolatile oils having dissolved therein small amounts of polymer binder.” (Kubrik, col. 2, lines 39-41). Thus, the polymers of Kubrick are taught to be water dispersible, but are taught as dissolvable into the oil base. Where water is added to the compositions, water-in-oil emulsions form which leave water-resistant oil films on the skin. (Kubrik, col. 2, lines 44-46). Applicants submit that such teaching fails to disclose or suggest a water dispersible acrylate copolymer emulsion as recited in claim 1. Further, at col. 4, line 66 to col. 2, Kubrik teaches that its oil formulations are prepared by mixing the oil base, polymer and ultraviolet light absorbing material together and

warming the mixture with slow agitation to about 140°F. Thus, the polymer is added to the oil base, then heated and mixed to dissolve the polymer in the oil. If water is added, the oil base having the polymer dissolved into it is combined to form a water-in-oil emulsion. Accordingly, it cannot be said that the copolymer of Kubrik is readily dispersible in the personal care composition at any point during processing without the need for additional processing. Here, the polymer is at least heated so the polymer can dissolve in the oil, regardless of the method for making the polymer e.g. bulk or emulsion.

Finally, as noted by the Office at page 6 of the Office Action, Kubik discloses that its soluble polymers include alkyl esters of 6 to 18 carbon atoms and exclude lower alkyl esters, implying that lower alkyl esters impart oil insoluble characteristics to the composition. Applicants' invention, as recited in claim 1, states that the copolymer emulsion has essentially no hydrophobic monomers having an alkyl group of greater than or equal to C8. Thus, even though there is a slight overlap in the number of carbon atoms, clearly Kubrik, when read as a whole, would have been read by one of ordinary skill in the art as teaching away from the use of polymers having a lower alkyl groups. Rather, the teachings of Kubrik would have pointed one of ordinary skill in the art to use higher alkyl groups to achieve Kubrik's requisite solubility parameter. Accordingly, Kubrick teaches away from Seib, which is directed to lower alkyl groups. Such lower alkyl groups, if included in the composition of Kubrik, would not be expected to function in Kubrik because these lower alkyl group polymers would not be soluble in the base oil. Similarly, Kubrik also teaches away from Applicants' invention, as Applicants' invention as recited in claim 1 requires essentially no hydrophobic monomers having an alkyl group of greater than or equal to C8.

Accordingly, for at least the above reasons, independent claim 1 is patentable over the combination of Seib in view of Kubrik. Claims 2, 8-10, 26-29 are also patentable over Seib or Cannell in view of Seib for at least the reasons that claim 1, from which they depend, is patentable, but may be separately patentable for additional reasons as well.

Rejection of Claims 1, 2, 8-10 and 27-29 under 35 U.S.C. § 103(a) based on Cannell in view of Seib and Kubik

All pending claims stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,221,389 (Cannell) in view of Seib and Kubik. Seib and Kubik have been discussed above. Cannell is being asserted as teaching aqueous carrier systems based on organic phospholipids capable of forming bilayers in aqueous solutions, nonionic surfactants, and amphoteric surfactants, wherein the carrier systems allow water-insoluble polymers to be incorporated into aqueous solutions (col. 1, lines 12-18). The compositions of Cannell include at least one organic phospholipid, at least one amphoteric surfactant and at least one nonionic surfactant (col. 2, lines 50-56). The Office asserts that Cannell teaches water-insoluble polymers that are unneutralized or partially neutralized. The Office acknowledges, however, that Cannell does not teach the claimed polymers and their water proofing or film forming effect. (Office Action, page 11).

Response to Rejection of Claims 1, 2, 8-10 and 27-29 under 35 U.S.C. § 103(a) based on Cannell in view of Seib and Kubik

Applicants submit that as based on the Office's admission, Cannell does not make up for the deficiencies of either Seib or Kubik, as argued above. Accordingly, Applicants' invention, as recited in claim 1, is distinguishable over Cannell in view of Seib and Kubik at least for the reasons set forth above with respect to Seib and Kubik. Applicants' submit, therefore, that claim 1 is patentable over the combination of Cannell, Seib and Kubik for at least those reasons. Claims 2, 8-10, 26-29 are also patentable over Cannell, Seib and/or Kubik for at least the reasons that claim 1, from which they depend, is patentable, but may be separately patentable for additional reasons as well.

Conclusion

In view of the arguments set forth above, Applicants respectfully submit that the pending application is in condition for allowance. Notice to this effect is earnestly solicited.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "James C. Abruzzo", is written over the typed name.

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